

NARRATIVE REPORT

FISHKUN, WILLOW CREEK, & BENTON LAKE

NATIONAL WILDLIFE REFUGES

January 1 to April 30, 1943

1. GENERAL

A. WEATHER CONDITIONS

As the Refuge Manager for Fishkun, Willow Creek, and Benton Lake was serving with the Armed Forces of the United States from November 21, 1942 to April 15, 1943, and as these refuges were not under any immediate observance during this time and up to the refuge managers return to duty on April 24th., detailed weather conditions and other pertinent data relative to water conditions such as run-off from melting snow and dates that lakes were free of ice were not observed by any official refuge personnel. The same is true relative to wildlife observances.

Information however for the period January 1 to April 30, relative to maximum and minimum temperatures, precipitation, and the amount of snowfall were available from records kept in the County Extension Office in Choteau and the following tables compiled from these and past records gives some very interesting comparative data of this period and the same period for several years past. A study of the tables will show that weather conditions were very much more severe this year.

<u>No.</u>	<u>Max.</u>	<u>Min.</u>	<u>1943</u>		<u>No. Days Below Zero</u>	<u>Precip. Inches</u>	<u>Snow Inches</u>
			<u>Mean Max.</u>	<u>Mean Min.</u>			
Jan.	58	-44	24.8	-3.6	18	.80	18.5
Feb.	64	-19	42.8	15.8	5	.38	10.5
Mar.	67	-25	39.8	9.3	12	.34	3.5
Apr.	75	20	59.6	31.1		1.80	5.0
Total					35	3.22	37.5
<u>1942</u>							
Jan.	56	-21	39.4	15.7	7	.16	4.5
Feb.	51	-24	30.7	8.7	7	.49	9.0
Mar.	67	2	46.6	23.8		.34	6.2
Apr.	80	11	61.1	28.9		.19	
Total					14	1.18	19.7

Weather Conditions Cont.

<u>1941</u>							
Jan.	65	-14	40.2	13.6	4	.04	1.5
Feb.	66	-9	43.4	16.2	2	.20	4.0
Mar.	68	2	51.6	18.9		.10	T
Apr.	72	12	61.0	28.4		<u>1.04</u>	<u>.5</u>
Total					6	1.40	6.0

<u>1940</u>							
Jan.	66	-23	29.5	4.6	13	.15	**
Feb.	57	-19	32.1	10.0	5	.35	**
Mar.	64	4	46.9	23.8		.47	**
Apr.	75	-12	48.9	23.1	1	2.16	**
Total					<u>19</u>	<u>4.03</u>	<u>**</u>

** Data on amounts of snowfall in 1940 was not available.

A summary of the preceeding tables show that the -44 of January 1943 was the coldest day recorded for the four years shown in the tables, infact past records since 1920 only record one day when the temperature has dropped lower than this. In February of 1936 a low of -50 was recorded. Also it will be noted that the mean minimum temperature for January this year shows a -3.6 degrees which is very unusual in this area. February of 1936 also shows a minus mean minimum temperature. This has happened only twice since 1920.

During the past period temperatures ranged below zero 35 days as compared with 14 days for the same period of 1942, six for 1941, and 19 for 1940. Winter and early spring precipitations were also well above normal. The 37.5 inches of snowfall during the past four month period is unusually high as can be seen by comparing it with previous years. From January 15 to February 13, snow covered the ground on the level to a depth ranging from 5 to 16 inches. This of course was due to the fact that for 12 days, January 15 to 26 inclusive there was 16 inches of snowfall with temperatures ranging from a -18 to a -44 degrees.

B. WATER CONDITIONS

1. General

On April 30 water conditions for this area in general are very promising. Although very little territory has been covered since the refuge manager returned to duty on April 24, small lakes and pot-holes that have been noted along the highways are as full now as they were during the later part of May and June of last year. Runoffs from melting snows was very heavy during February 13 to 21, during which time all of these small lakes and potholes were filled. March being cold and quite dry, streams remained at a normal level, but steadily raised during April. An unusually large amount of unmelted snow still remains in the mountains at this time and a very heavy flow from these mountain watersheds is expected during May and June.

Water Conditions Contd.

2. Fishkum

Waterlevels of Fishkum Reservoir remained about the same throughout all the winter and early spring months. When the outlet and inlet gates were closed last fall the level of the reservoir was 4361.0. Up to April 30th. this year no water has been turned into the reservoir, thus winter and spring snows and rains have maintained about a constant level. Other small lakes in the Fishkum area have maintained an overflow level throughout this period.

3. Willow Creek.

When the refuge manager left the Service for Army duty the later part of November last year, the water level at Willow Creek was up to 4128.5. On April 30th this period the guage reading was 4127.3 but higher water markings on this guage showed that only recently the level of the reservoir was up to 4130.5. A large amount of water must have been taken out of the reservoir very recently but the level it was dropped to is unknown as no contact has been made with the Reclamation Service up to this time. High water markings along the shore show that the reservoir extended well up into the lower end of the fenced nesting area and that for the first time in the history of the reservoir and refuge, a large island containing approximately 30 to 40 acres was formed in the western end of the reservoir site. The level of the reservoir will again have to come up to about 4129.5 to again complete this island, but this should not take more than a few weeks with the present flow of water entering the reservoir.

4. Benton Lake.

When visiting the Benton Lake area in company with Mr. Mushbach on April 26 it was learned that there is water in Benton Lake again this spring. This information was obtained from several of the ranchers in the area but all had different conceptions as to how much water was in the lake. One thought there was as much now as there was last year. Due to snow and fog, vision was restricted to only a short distance on April 26 and road conditions were such that only gravel roads were travelable so no first hand information could be obtained.

11 WILDLIFE

As no observations of Wildlife were made prior to April 28th., only very little information relative to all species of wildlife is available and this only for the easement areas joining Fishkum. It was learned from Mrs. Madson and Lloyd Love who own and control all of these easement areas that waterfowl during the last half of March and April were very numerous on the small lakes of the easement areas. They stated that during the peak of Migration there seemed to be a

Wildlife Contd.

great many more birds than in previous years. On April 28th I made an observation of the birds on Pishkun and although all species common to the area were noted, no large concentrations were observed. All ducks noted were in pairs or small bunches. Mr. Love informed me that he has already noted a Mallard's nest with 3 eggs in the easement area.

On May 1st I noted approximately 7000 ducks, 2 White Pelican, 350 California Gulls, 17 Common Loon, 50 Horned Grebe, and a large number of American Coot at Willow Creek. Willow Creek reservoir now covers a very large area and on the date of this observation the lake was very rough making it quite impossible to identify all the ducks. All species common to the area were noted though close to shore and 7 Cinnamon Teal were noted in with a small flock of Blue-winged Teal. Also about 700 American Mergansers were noted in one raft.

Also on May 1st I noted 3 Pintail Grouse, 1 male and 2 females, on a drumming grounds in the upper end of the nesting area at Willow Creek. This observation was made at about 5 p.m. and is the first time I have Pintails on drumming grounds at Willow Creek. One of the females was partly concealed under a small sage bush while the male and other female was out in the open. I observed the male dancing and drumming around the one female for about 10 minutes. Most of the time he was at a distance of about 10 feet away from her. When he approached any closer she would walk away and finally when he made a dash coming within 2 feet of her she flew away leaving the area completely. The male then resumed his dancing around the other female sitting underneath the sage bush.

Upon contacting Bruce Neal, local game warden, on this date, we discussed the Pintail Grouse situation. Mr. Neal informed me that Pintails are now very numerous all the way up the Willow Creek drainage and well into the foothill area. He also stated that for a long time previous to 1940 no pintails were were noted in the entire area west of Willow Creek Refuge. During the fall and winter of 1938 and 1939, 7 or 8 birds were noted and fed in one upland bird shelter on the Willow Creek Refuge. During the winter of 1939 and 1940 quite a large increase was noted in the Pintail population on the refuge. During the summer of 1940 they began to extend their flights and feedings well up the creek from the nesting area. Both Mr. Neal and I believe that the large flocks now observed all the way up Willow Creek have originated from the 7 or 8 birds on the refuge in 1938 and 1939. This large increase is ofcourse largely due to the fact that State hunting regulations has afforded these game birds much more protection during past years but much credit is also due the fact that the fencing of the nesting area on this refuge and the construction of upland bird shelters together with winter feeding stations has given the birds much needed protection against cold, hunger, and predatory birds and animals, especially during those years when they were very scarce and the loss of a few birds would maybe mean the loss of 2000 birds over a 6 year period.

III REFUGE DEVELOPMENT & MAINTENANCE

No development work has been done on any of the refuges in this area during the past 4 month period and there has been no maintenance other than the inspection of the headquarters area and nesting area fences, pumping out the well and reconnecting water lines in the residence building, and inspection and inflating the tires of the Chevrolet stake truck FWS-320.

IV ECONOMIC USE

On April 26 Mr. Mushbach and I visited the Benton Lake area and held discussions with 2 ranchers of that area relative to the economic use program for the coming season. Plans as discussed with all of the ranchers last fall were reviewed and the purchasing of a stock watering system by these ranchers in connection with economic use permits was planned to be purchased and installed for use this season. Almost \$8000.00 was received in payments for economic use permits last season but present indications show that we can expect more than that for the coming season.

Since no wildlife observations of any kind have been taken during the last 4 month period, narrative report forms 1-2-4 are not being submitted with this report.

May 4, 1943

Laborer-Patrolman

Regional Director

SUMMARY OF HIGHLIGHTS DURING PAST YEAR

1. Weather Conditions; Re WATERFOWL: BENTON LAKE

Weather conditions were such during the past year that all small lakes and potholes that were filled during the spring of 1942, maintained enough water so that young ducks and other waterfowl birds were well able to fly and seek larger waters before their home rearing ponds were dried up. Some water remained in Benton Lake well up into October. Large numbers of Mallards, Pintails, Shovellers, Gadwals, Blue-winged Teal, and Baldpates nested on the refuge this year. Other nesting birds that were also very numerous were Avocets, Jack Snipes, Killdeer, Black Terns, Lark Buntings, and Red-winged Blackbirds. In all it is estimated that about 10,000 waterfowl and shorebirds nested on the refuge during the 1942 nesting season.

2. PHYSICAL DEVELOPMENTS

A. Refuge Boundary Markers,

The posting of the new Fish and Wildlife Service refuge boundary markers was completed at Pishkun and Benton Lake during the past year. At Benton Lake the old signs were taken down and new ones put up on the same posts. Occasionally a post had to be replaced but as a whole these posts were in good condition. At Pishkun new posts were substituted for the old ones in every case. These were Juniper posts obtained and treated at the National Bison Range. Posts were set 2½ feet in the ground and where they were out in the open away from fence lines rocks were piled up about 1½ feet on the post to keep stock from rubbing them down.

B. Household Water Supply, Pishkun

During August of 1942 the installation of a gasoline driven water pump, 200 gallon pressure tank and all necessary connecting water pipes and plumbing fixtures was completed. Plumbing fixtures installed consisted of a kitchen sink, and a bathroom washbowl, toilet, and shower stall. Shower stall however was constructed with cement floor and masonite walls. All materials and fittings that were available at the Bison Range were used in the installation of this water system. A Meyers Deep Well Pump driven by a gasoline Briggs and Stratton Motor is used for pumping. This is so arranged that when the pressure in the pressure tank is built up to 50 pounds the motor automatically cuts off. An outside hose faucet was also installed from this system is used for watering the lawn and shrubs around the residence building.

3. ECONOMIC USE: BENTON LAKE

A. Grazing

Economic use permits for the grazing of cattle were issued to Arthur Hazeltine, Chas Biederager, John Hinkle, and R. R. Swan. Mr. Swan did not use his permit because during the earlier part of the grazing season he was too busy harvesting to stop and gather his cattle and when he did have time the water had dried up in the refuge.

Economic Use, Grazing Contd.

The following is a summary of the animal units used and the fees obtained for grazing permits during the fall of 1942.

Name of Permittee	Units Used	Fee Obtained
Arthur Hazeltine	135	\$67.50
John Hinkle	51	25.50
Chas Hinderager	150	75.00
R. R. Swan	---	50.00
Total	336	168.00

B. Haying:

Nine permits for the harvesting of hay were issued to ranchers of the Benton Lake area during the 1942 haying season. Because of the labor situation the permits issued to Lloyd Johnston and Wilfrid Maurer were not used although down payments on the permits were received. The following is a summary of the number of tons harvested and the fee obtained:

Permittee	Tons Harvested	Fee Obtained
Arthur Hazeltine	64.25	\$64.25
John Hinkle	76.54	76.54
Verle Ewing	74.00	74.00
Carl Hinderager	70.00	70.00
Chas Hinderager	135.00	135.00
Chris Hagnes	24.90	24.90
Lloyd Johnston	---	10.00
Wilfrid Maurer	---	25.00
	444.69	479.69

It is believed that at least 1500 ton of hay could have been harvested on the Benton Lake Refuge last fall if it had not been so hard to get farm laborers.

Economic Uses

Benton Lake

Twenty one economic use permits were issued at Benton Lake this year for hay and grazing privileges and one free use permit was issued to Cascade County for graveling the county road going through the refuge. 1717 A.U.M. of grazing brought in \$581.40 and an estimated 620 acres of hay produced 503.70 tons or a value of \$398.35. These sums are in addition to the value received through the plowing and maintaining of the twenty two miles of fire guards, (\$176.00) and the installing of the stock watering system valued at \$256.60.